

In re Application of:  
Tamburini et al.  
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Filed: October 10, 2001  
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Attorney Docket No.: AERO1130-4

**Amendments to the claims**

Please amend claim 12.

The listing of the claims will replace prior versions, and listings of claims in the application.

**Listing of claims:**

1-11. (Canceled)

12. (Currently amended) An isolated nucleic acid sequence, wherein the nucleic acid encodes a protein having serine protease inhibitory activity, comprising one of the following amino acid sequences:

ADRERSIHDF	CLVSKVVGRC	RASMPRWWYN	VTDGSCQLFV	YGGCDGNSNN	50
YLTKEECLKK	CATVTENATG	DLATSRNAAD	SSVPSAPRRQ	DSEDHSSDMF	100
NYEEYCTANA	VTGPCRASFP	RWYFDVERNS	CNNFIYGGCR	GNKNSYRSEE	150
ACMLRCFRQQ	ENPPLPLGSK				170
(SEQ ID NO:52);					

		MAQLCGL	RRSRAFLALL	GSLLLLSGVLA	-1
ADRERSIHDF	CLVSKVVGRC	RASMPRWWYN	VTDGSCQLFV	YGGCDGNSNN	50
YLTKEECLKK	CATVTENATG	DLATSRNAAD	SSVPSAPRRQ	DSEDHSSDMF	100
NYEEYCTANA	VTGPCRASFP	RWYFDVERNS	CNNFIYGGCR	GNKNSYRSEE	150
ACMLRCFRQQ	ENPPLPLGSK	VVVLAGLFVM	VLILFLGASM	VYLIRVARRN	200
QERALRTVWS	SGDDKEQLVK	NTYVL			225
(SEQ ID NO:49);					

ADRERSIHDF	CLVSKVVGRC	RASMPRWWYN	VTDGSCQLFV	YGGCDGNSNN	50
YLTKEECLKK	CATVTENATG	DLATSRNAAD	SSVPSAPRRQ	DSEDHSSDMF	100
NYEEYCTANA	VTGPCRASFP	RWYFDVERNS	CNNFIYGGCR	GNKNSYRSEE	150
ACMLRCFRQQ	ENPPLPLGSK	VVVLAGLFVM	VLILFLGASM	VYLIRVARRN	200
QERALRTVWS	SGDDKEQLVK	NTYVL			225
(SEQ ID NO:71);					

			AGSFLAWL	GSLLLLSGVLA	-1
ADRERSIHDF	CLVSKVVGRC	RASMPRWWYN	VTDGSCQLFV	YGGCDGNSNN	50
YLTKEECLKK	CATVTENATG	DLATSRNAAD	SSVPSAPRRQ	DSEDHSSDMF	100
NYEEYCTANA	VTGPCRASFP	RWYFDVERNS	CNNFIYGGCR	GNKNSYRSEE	150
ACMLRCFRQQ	ENPPLPLGSK	VVVLGAVS			179
(SEQ ID NO:2)					

			MLR	AEADGVSRL	GSLLLLSGVLA	-1
ADRERSIHDF	CLVSKVVGRC	RASMPRWWYN	VTDGSCQLFV	YGGCDGNSNN	50	
YLTKEECLKK	CATVTENATG	DLATSRNAAD	SSVPSAPRRQ	DSEDHSSDMF	100	

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NYEEYCTANA VTGPCRASFP RWYFDVERNS CNNFIYGGCR GNKNSYRSEE 150  
ACMLRCFRQQ ENPPLPLGSK VVVLAGLFVM VLILFLGASM VYLIRVARRN 200  
QERALRTVWS SGDDKEQLVK NTYVL 225  
(SEQ ID NO:45);

MAQLCGL RRSRAFLALL GSLLLSGVLA -1  
ADRERSIHDF CLVSKVVGRC RASMPRWWYN VTDGSCQLFV YGGCDGNSNN 50  
YLTKEECLKK CATVTENATG DLATSRNAAD SSVPSAPRRQ DSEDHSSDMF 100  
NYEEYCTANA VTGPCRASFP RWYFDVERNS CNNFIYGGCR GNKNSYRSEE 150  
ACMLRCFRQQ ENPPLPLGSK VVVLAGLFVM VLILFLGASM VYLIRVARRN 200  
QERALRTVWS FGD 213  
(SEQ ID NO:47);

ADRERSIHDF CLVSKVVGRC RASMPRWWYN VTDGSCQLFV YGGCDGNSNN 50  
YLTKEECLKK CATVTENATG DLATSRNAAD SSVPSAPRRQ DSEDHSSDMF 100  
NYEEYCTANA VTGPCRASFP RWYFDVERNS CNNFIYGGCR GNKNSYRSEE 150  
ACMLRCFRQQ ENPPLPLGSK VVVLAGLFVM VLILFLGASM VYLIRVARRN 200  
QERALRTVWS FGD 213  
(SEQ ID NO:70);

IHDF CLVSKVVGRC RASMPRWWYN VTDGSCQLFV YGGCDGNSNN 50  
YLTKEECLKK CATV 64  
(SEQ ID NO:4);

~~CLVSKVVGRC RASMPRWWYN VTDGSCQLFV YGGCDGNSNN 50~~  
~~YLTKEECLKK C 61~~  
(SEQ ID NO:5);

YEEYCTANA VTGPCRASFP RWYFDVERNS CNNFIYGGCR GNKNSYRSEE 150  
ACMLRCFRQ 159  
(SEQ ID NO:6);

~~CTANA VTGPCRASFP RWYFDVERNS CNNFIYGGCR GNKNSYRSEE 150~~  
~~ACMLRC 156~~  
(SEQ ID NO:7);

IHDF CLVSKVVGRC RASMPRWWYN VTDGSCQLFV YGGCDGNSNN 50  
YLTKEECLKK CATVTENATG DLATSRNAAD SSVPSAPRRQ DSEDHSSDMF 100  
NYEEYCTANA VTGPCRASFP RWYFDVERNS CNNFIYGGCR GNKNSYRSEE 150  
ACMLRCFRQ 159  
(SEQ ID NO:3);

CLVSKVVGRC RASMPRWWYN VTDGSCQLFV YGGCDGNSNN 50  
YLTKEECLKK CATVTENATG DLATSRNAAD SSVPSAPRRQ DSEDHSSDMF 100  
NYEEYCTANA VTGPCRASFP RWYFDVERNS CNNFIYGGCR GNKNSYRSEE 150  
ACMLRC 156  
(SEQ ID NO:50); and

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ADRERSIHDF	CLVSKVVGRC	RASMPRWWYN	VTDGSCQLFV	YGGCDGNSNN	50
YLTKEECLKK	CATVTENATG	DLATSRNAAD	SSVPSAPRRQ	DSEDHSSDMF	100
NYEEYCTANA	VTGPCRASFP	RWYFDVERNS	CNNFIYGGCR	GNKNSYRSEE	150
ACMLRCFRQQ	ENPPLPLGSK	VVVLGAVS			179

(SEQ ID NO:1) ~~and~~

<del>ADRERSIHDF</del>	<del>CLVSKVVGRC</del>	<del>RASMPRWWYN</del>	<del>VTDGSCQLFV</del>	<del>YGGCDGNSNN</del>	<del>50</del>
<del>YLTKEECLKK</del>	<del>CATVTENATG</del>	<del>DLATSRNAAD</del>	<del>SSVPSAPRRQ</del>	<del>DS</del>	<del>92</del>

~~(SEQ ID NO:8).~~

13. (Previously presented) The nucleic acid sequence of claim 12, wherein the nucleic acid comprises a sequence selected from SEQ ID NOS: 9, 32, 44, 46, 48, 51 or 75.

14. (Previously presented) A self-replicating expression vector, comprising a nucleic acid sequence of claim 12 or 13.

15. (Previously presented) The expression vector of claim 14, wherein the expression vector expresses a protein that:

(a) is glycosylated; or

b) contains at least one intra-chain cysteine-cysteine disulfide bond; or

(c) is both glycosylated and contains at least one intra-chain cysteine-cysteine disulfide bond.

16. (Previously presented) A method of producing a protein encoded by a nucleic acid of claim 12, comprising:

(a) inserting the nucleic acid into an appropriate protein expression vector by use of a recombinant DNA technology, to create a bikunin expression vector; and

(b) subjecting the bikunin expression vector to an appropriate protein expression system.

17. (Previously presented) The method of claim 16, wherein the protein:

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(a) is glycosylated;

(b) contains at least one intra-chain cysteine-cysteine disulfide bond; or

(c) is both glycosylated and contains at least one intra-chain cysteine-cysteine disulfide bond.